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# BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT

Post Office Box 338, Walnut Grove, California 95690

Larry L. Gardiner      President  
H. Denis Van de Maele      Vice President  
Frank E. Silva, Jr.      Director  
Manuel Rebero      Director

Kipling T. Korth      Director  
Andy Giannini      Superintendent  
DCC Engineering Co., Inc.      Engineer/Secretary  
Victoria Hale      Bookkeeper

January 30, 2006

*ml 2/10/06*

Colonel Ronald N. Light, District Engineer  
Sacramento District  
U.S. Army Corps of Engineers  
1325 J Street  
Sacramento, CA 95814

RECEIVED

FEB 0 6 2006

Dear Colonel Light:

This letter conveys Brannan-Andrus Levee Maintenance District's (BALMD) intent to participate in feasibility studies and/or other actions, in the development of a **BALMD Stability Berm Project**, as the non-Federal sponsor consistent with the CALFED Bay-Delta Authorization Act (Public Law 108-361).

BALMD understands that the type, cost, and scope of actions will be determined and specified later if selected for development and/or implementation pursuant to the Act. BALMD also understands that if our project is approved for implementation, we will be responsible for sharing the cost of planning, designing, and implementation of the project with the U.S. Army Corps of Engineers; providing all necessary lands, easements, rights-of-way, relocations, excluding railroads, and suitable borrow and dredged or excavated material disposal areas; and accomplishing operation, maintenance, repair, replacement and rehabilitation of the project.

Please note that this letter of intent is not an obligation of funds. We look forward to working with the U.S. Army Corps of Engineers, the State of California, and other pertinent CALFED agencies and stakeholders on this important project.

If you have any questions, you may contact our District Engineer, Gilbert Labrie at 916-776-2277.

Sincerely,

*Debbie Phulps*

Debbie Phulps  
District Secretary

*Spoken Debbie  
acknowledges*

# **BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT**

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## **SACRAMENTO - SAN JOAQUIN DELTA ISLANDS & LEVEES CALFED LEVEE SYSTEM INTEGRITY PROGRAM**

### **BALMD PROJECT PROPOSAL NO 1**

**NAME AND PURPOSE:** Brannan-Andrus Island Stability Berm Project to improve levee stability, reduce crown subsidence and slope failures, and increase the factor of safety and level of protection for the island.

**LOCATION:** Mokelumne River from levee stations 55+00 to 100+00 and from 106+00 to 115+00.  
Sevenmile Slough from levee station 310+00 to 355+00.

**PROBLEMS:** Instability, resulting in crown subsidence, scarping and slope failure. These are historic problem areas. The Mokelumne River levee reach involved, forms an extended, outside bend in the river and is subjected to significant, erosive forces during normal conditions because of in-delta water transport, and during winter high water events. Since 1984, the Brannan-Andrus Levee Maintenance District (BALMD) has spent well over \$5 million to repair under-water erosion, overcome crown subsidence, control seepage and maintain adequate slope protection along this reach. During the 1997 flood event the Corps of Engineers spent over \$1 million to construct three separate buttress berms and install a French drain, within this same reach, to address some severe disturbance and scarping as well as excessive seepage.

The Sevenmile reach was also being monitored during the 1997 event period because of signs of slope failure and because it represents a higher risk section of levee, due to the excess water pressures resulting from the greater elevation differential between the in-channel water surface and the land-side levee toe. The levee crown along this reach has been raised twice in the last seven years, just to attempt to maintain minimum freeboard protection and is slated to have another subsided section repaired in the fall of 2006.

**AT RISK:** Infrastructure of statewide significance, State Highways 12 and 160, the Rio Vista Gas Field, and an important leg of the in-delta conveyance network. The City of Isleton. A major state recreation area. Water quality, which was threatened when the island last flooded in 1972 and required increased upstream releases to offset potential degradation due to increased salinity.

**OPPORTUNITIES:** Improve the reliability of the BALMD levee system and reduce the risk and probability of flooding due to catastrophic levee failure. Thereby avoiding;

1. A major disruption to critical intrastate commerce and commute corridors,

2. Shutting natural gas extraction from a significant reserve field,
3. Significant property damage, crop losses, business disruption or destruction, and economic devastation for the area and its inhabitants,
4. Water conveyance disruption,
5. Water quality degradation, and
6. The major state level economic consequence associated with the repair of a break in a high levee and pumping out a 13,000 acre island.

**PROJECT DESCRIPTION:** Construct stability berms with imported material or re-use dredge spoils delivered to property (100 acres) purchased by BALMD to receive and re-handle dredge material. The material could be delivered to most of the sites with off-road equipment. The Sevenmile Slough site also requires construction of a French drain and relocation of the existing toe drain that also doubles as an irrigation ditch. The toe ditch at the Mokelumne River sites has already been converted to a French drain, in anticipation of the eventual construction of a stability berm. The height and width of the berm is subject to a thorough geotechnical investigation and evaluation, but a lower wider buttress configuration was used to estimate the quantity of material required for this proposal and thereby assign an estimated cost.

This proposal involves construction of 9900 lineal feet of stability berm and installation of 4500 lineal feet of French drain. The total estimated cost for this project is \$4 million, including easement acquisition.

All of the construction activity in this proposal will take place on the land side of the levee and involves very minimal disruption of vegetation, other than native grasses. To mitigate for any impacts, the District has been taking steps to develop a habitation mitigation area on a portion of its dredge material re-handling site. The only impact envisioned involves the toe ditch along Sevenmile Slough and some shrub scrub vegetation (willows) in the vicinity of the French drain along the toe of the Mokelumne River levee. This type of project impact and mitigation concept has been discussed with State Fish and Game personnel assigned to the Levee Subventions Program.

Sacramento County has determined that the District will need a use permit for the proposed use of its property as a temporary dredge material re-handling site.

**POINT OF CONTACT:** The contact person for the project is Gilbert Labrie, Managing Principal for DCC Engineering, District Engineer for BALMD. DCCE's phone number is 916-776-2277 and its e-mail address is [dccengineering@citlink.net](mailto:dccengineering@citlink.net)

DCC Engineering is located in Walnut Grove, California at 14315 River Road.

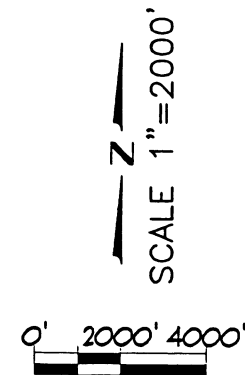
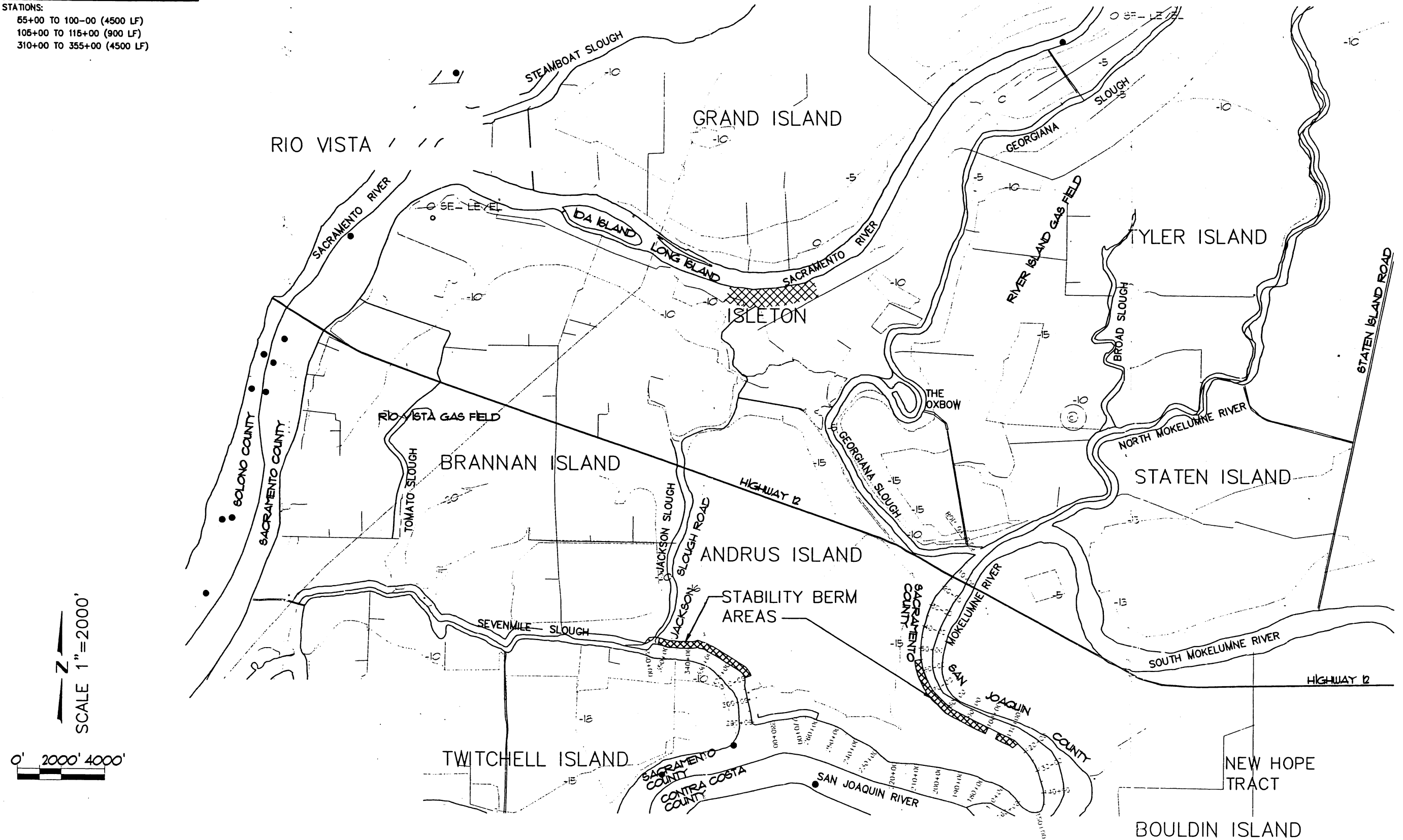
#### **SCOPING AND SCREENING INFORMATION :**


- Urgency - The project involves historically unstable areas where incidents occurred in the recent past and it is only a matter of time, coupled with an exceptionally wet weather cycle before the work proposed would have to be undertaken during a storm event.
- Flood flow impacts - The project would not effect flood flows in other areas of the levee system.

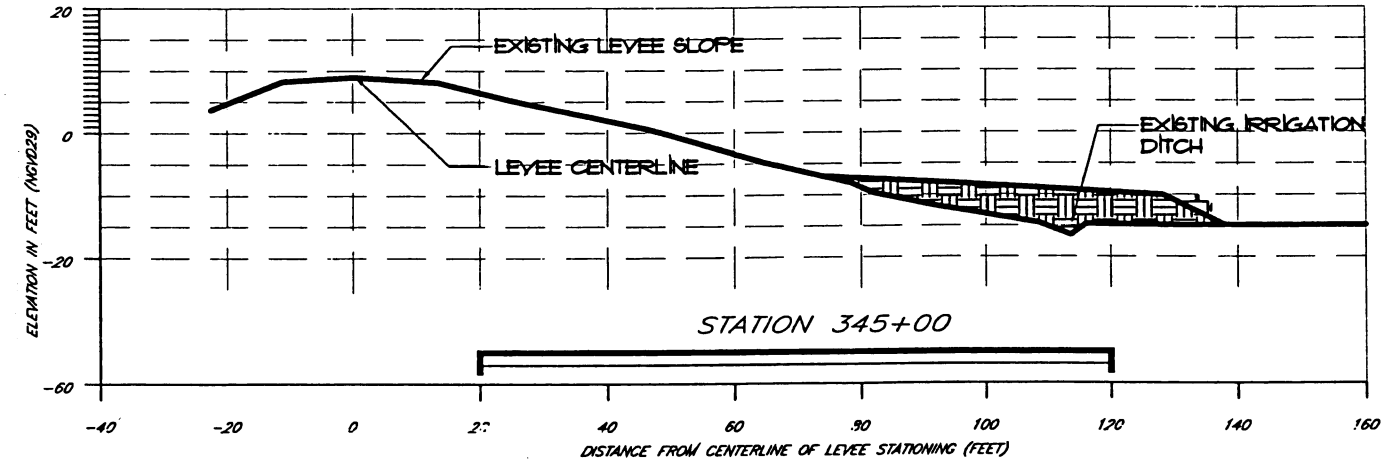
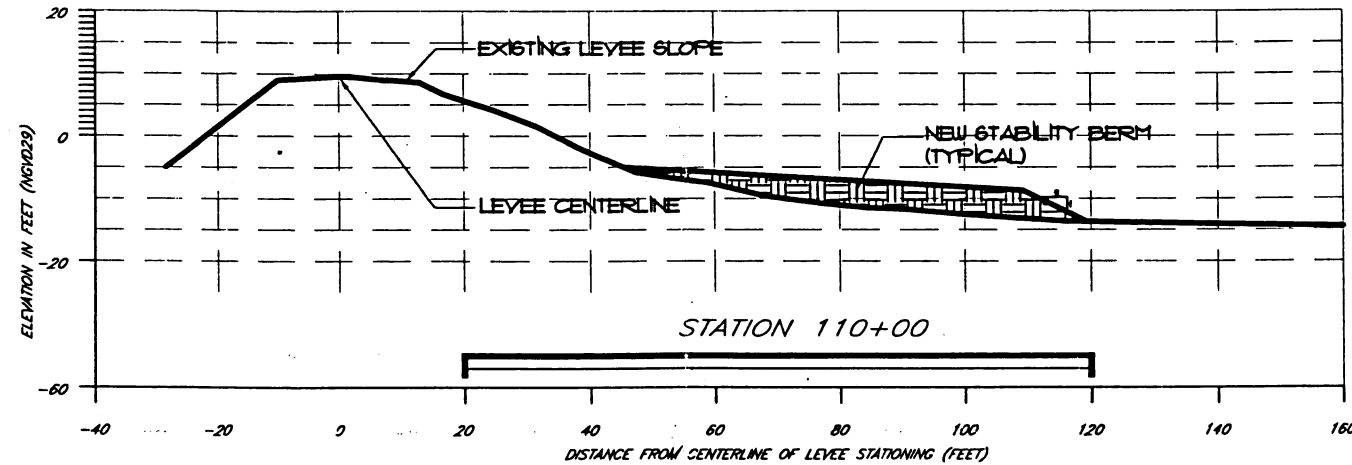
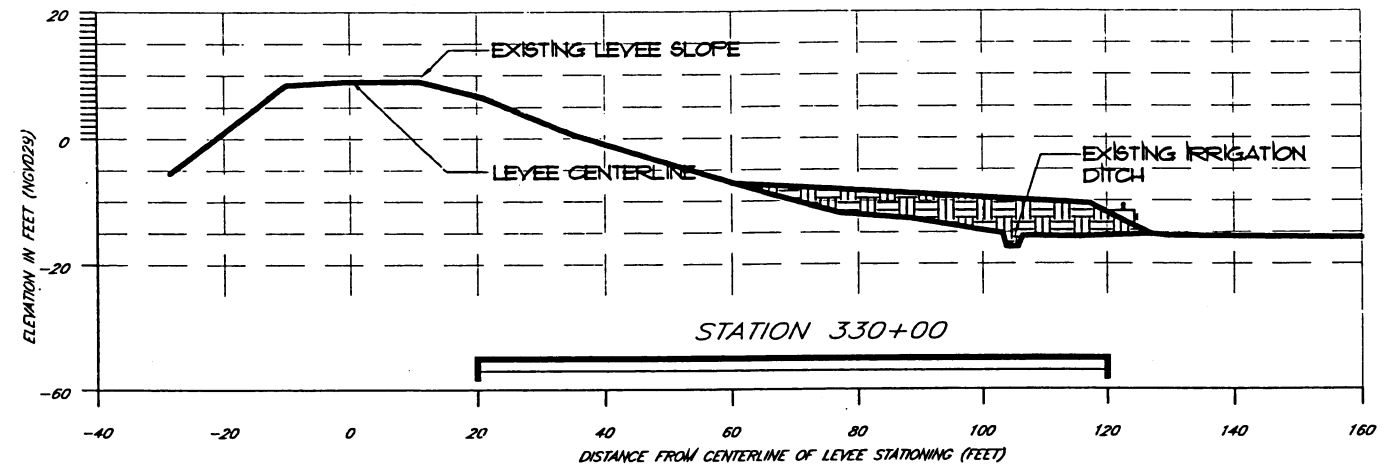
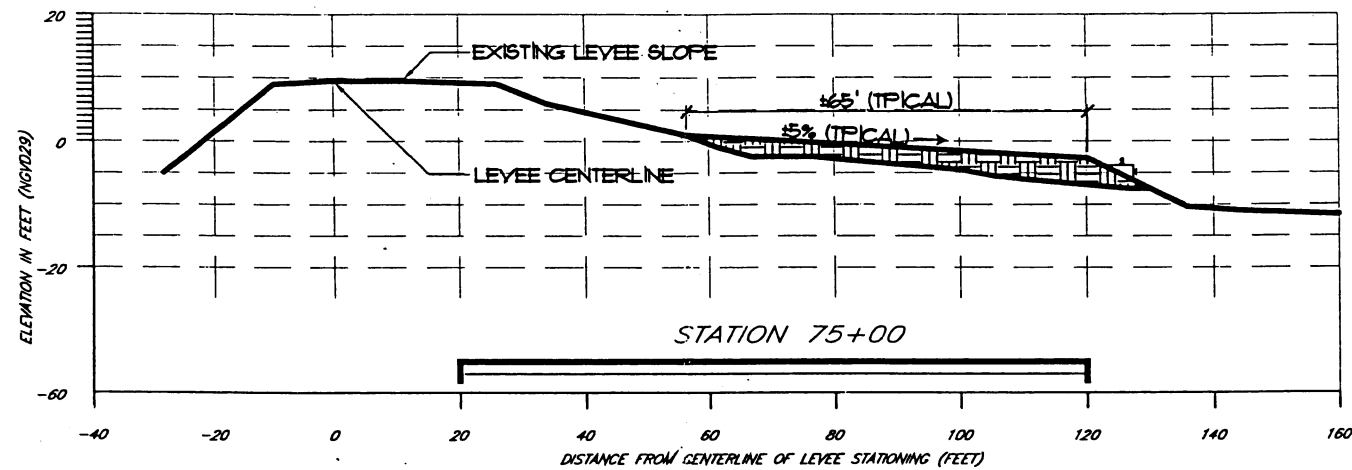
- **Project results** - Reduce the potential for flooding of crucial infrastructure with regional and statewide importance. Reduce the risk for significant property damage and economic loss. Reduce the threat to an existing, historic community and major recreational resource. Reduce the threat to water quality and water transport reliability that a levee failure would pose.
- **Alternatives** - There are no non-structural alternatives to this proposal.
- **Who Benefits** - Long term beneficiaries include the State, water contractors, local residents, business and recreational interests.
- **Federal, State and local Support** -The District has been a consistent participant in the Levee Subventions Program and a recipient of State support.
- **Obstacles** - None are known.
- **Cost Sharing** - The local Levee District has indicated its willingness to cost share

# STABILITY BERM AREAS

STATIONS:  
 65+00 TO 100+00 (4500 LF)  
 106+00 TO 116+00 (900 LF)  
 310+00 TO 355+00 (4500 LF)



						DESIGNED BY: GILBERT LABRIE	 <div>DCC ENGINEERING CO., INC.</div> <div>Tel (916) 778-2877 Fax (916) 778-2883 P.O. BOX 929, WALNUT GROVE, CA 95690</div> <div>Architecture Civil Engineering Land Use Planning Feasibility Studies Environmental Permitting Program/Construction Management</div>	APPROVED BY:	BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT 2006 STABILITY BERM PROJECT	SITE PLAN	7002.00
					DRAWN BY: YA HER	REG. NO.:		SHEET			
					REVIEWED BY: GILBERT LABRIE	EXP. DATE:		1			
					SUBMITTED BY:	DATE:		OF 2			
REV.	DATE	BY	DESCRIPTION	APPROVED	DATE	DATE: 1-31-06					



REV.	DATE	BY	DESCRIPTION	APPROVED	DATE

DESIGNED BY: GILBERT LABRE  
 DRAWN BY: YA HER  
 REVIEWED BY: GILBERT LABRE  
 SUBMITTED BY:  
 PROJECT NUMBER:  
 DATE: 1-31-08



**DCC**  
**ENGINEERING**  
**CO., INC.**  
 Tel (916) 778-2277 Fax (916) 778-2288  
 P.O. BOX 228, WALNUT GROVE, CA 95690

Architecture  
 Civil Engineering  
 Land Use Planning  
 Feasibility Studies  
 Environmental Permitting  
 Program/Construction Management

APPROVED BY:  
 REG. NO.:  
 EXP. DATE:  
 DATE:

BRANNAN-ANDRUS LEVEE  
 MAINTENANCE DISTRICT  
 2006 STABILITY BERM PROJECT

REPRESENTATIVE  
 CROSS SECTIONS

7002.00  
 SHEET  
**2**  
 OF 2

2 1/2

**BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT**  
**Post Office Box 338, Walnut Grove, California 95690**

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January 30, 2006

Colonel Ronald N. Light, District Engineer  
Sacramento District  
U.S. Army Corps of Engineers  
1325 J Street  
Sacramento, CA 95814

Dear Colonel Light:

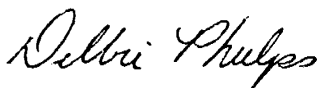
This letter conveys Brannan-Andrus Levee Maintenance District's (BALMD) intent to participate in feasibility studies and/or other actions, in the development of a **BALMD Seepage Cut-Off Wall Project**, as the non-Federal sponsor consistent with the CALFED Bay-Delta Authorization Act (Public Law 108-361).

BALMD understands that the type, cost, and scope of actions will be determined and specified later if selected for development and/or implementation pursuant to the Act. BALMD also understands that if our project is approved for implementation, we will be responsible for sharing the cost of planning, designing, and implementation of the project with the U.S. Army Corps of Engineers; providing all necessary lands, easements, rights-of-way, relocations, excluding railroads, and suitable borrow and dredged or excavated material disposal areas; and accomplishing operation, maintenance, repair, replacement and rehabilitation of the project.

Please note that this letter of intent is not an obligation of funds. We look forward to working with the U.S. Army Corps of Engineers, the State of California, and other pertinent CALFED agencies and stakeholders on this important project.

If you have any questions, you may contact our District Engineer, Gilbert Labrie at 916-776-2277.

Sincerely,



Debbie Phulps  
District Secretary

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## SACRAMENTO - SAN JOAQUIN DELTA ISLANDS & LEVEES CALFED LEVEE SYSTEM INTEGRITY PROGRAM

### BALMD PROJECT PROPOSAL NO 2

**NAME AND PURPOSE :** Brannan-Andrus Island Seepage Cut-off Wall Project to permanently arrest subsurface seepage and improve levee stability, reduce crown subsidence, and increase the reliability of flood protection for the island.

**LOCATION :** San Joaquin River from levee stations 252+00 to 256+00.

**PROBLEMS:** Instability, resulting in on going crown subsidence. This is another historic problem area, in fact this reach is immediately adjacent to the site of the 1972 levee break that flooded this entire island and led to the establishment of the Levee Subventions Program. The Brannan-Andrus Levee Maintenance District (BALMD) has raised the levee crown at this location twice since 1996 and was planning to again address the problem in the fall of 2005, but deferred the project pending a geotechnical investigation.

**AT RISK:** Infrastructure of statewide significance, State Highways 12 and 160, the Rio Vista Gas Field, and an important leg of the in-delta conveyance network. The City of Isleton. A major state recreation area. Water quality, which was threatened when the island last flooded in 1972 and required increased upstream releases to offset potential degradation due to increased salinity.

**OPPORTUNITIES:** Improve the reliability of the BALMD levee system and reduce the risk and probability of flooding due to catastrophic levee failure. Thereby avoiding;

1. A major disruption to critical intrastate commerce and commute corridors,
2. Shutting natural gas extraction from a significant reserve field,
3. Significant property damage, crop losses, business disruption or destruction, and economic devastation for the area and its inhabitants,
4. Water conveyance disruption,
5. Water quality degradation, and
6. The major state level economic consequence associated with the repair of a break in a high levee and pumping out a 13,000 acre island.

**PROJECT DESCRIPTION:** This proposal is to install a steel sheet pile cut-off wall on the water-side edge of the levee crown at an unstable section of levee, opposite a historic wet area occurring at the land-side toe of the levee. The sheet piles would be installed with a special piece of

equipment that uses hydraulic pressure to insert the piles into the ground and has the on-board ability to control alignment to insure that the sheet pile segments properly interlock and provide a reliable system. The sheet pile lengths will be determined based on an evaluation of geotechnical data and a recommendation from the District's geotechnical engineer. For the purpose of assigning a cost to the project, a 50-foot length was assumed. This method was used successfully during the recent, January 1, 2006, storm event to cut off a major piping situation on an adjacent island.

This proposal involves the construction of a 400 lineal foot sheet pile wall section. The total estimated cost for this project is \$1 million.

All of the construction activity in this proposal will take place on the levee crown and involves very minimal disruption of vegetation, other than native grasses.

**POINT OF CONTACT:** The contact person for the project is Gilbert Labrie, Managing Principal for DCC Engineering, District Engineer for BALMD. DCCE's phone number is 916-776-2277 and its e-mail address is [dccengineering@citlink.net](mailto:dccengineering@citlink.net).

DCC Engineering is located in Walnut Grove, California at 14315 River Road.

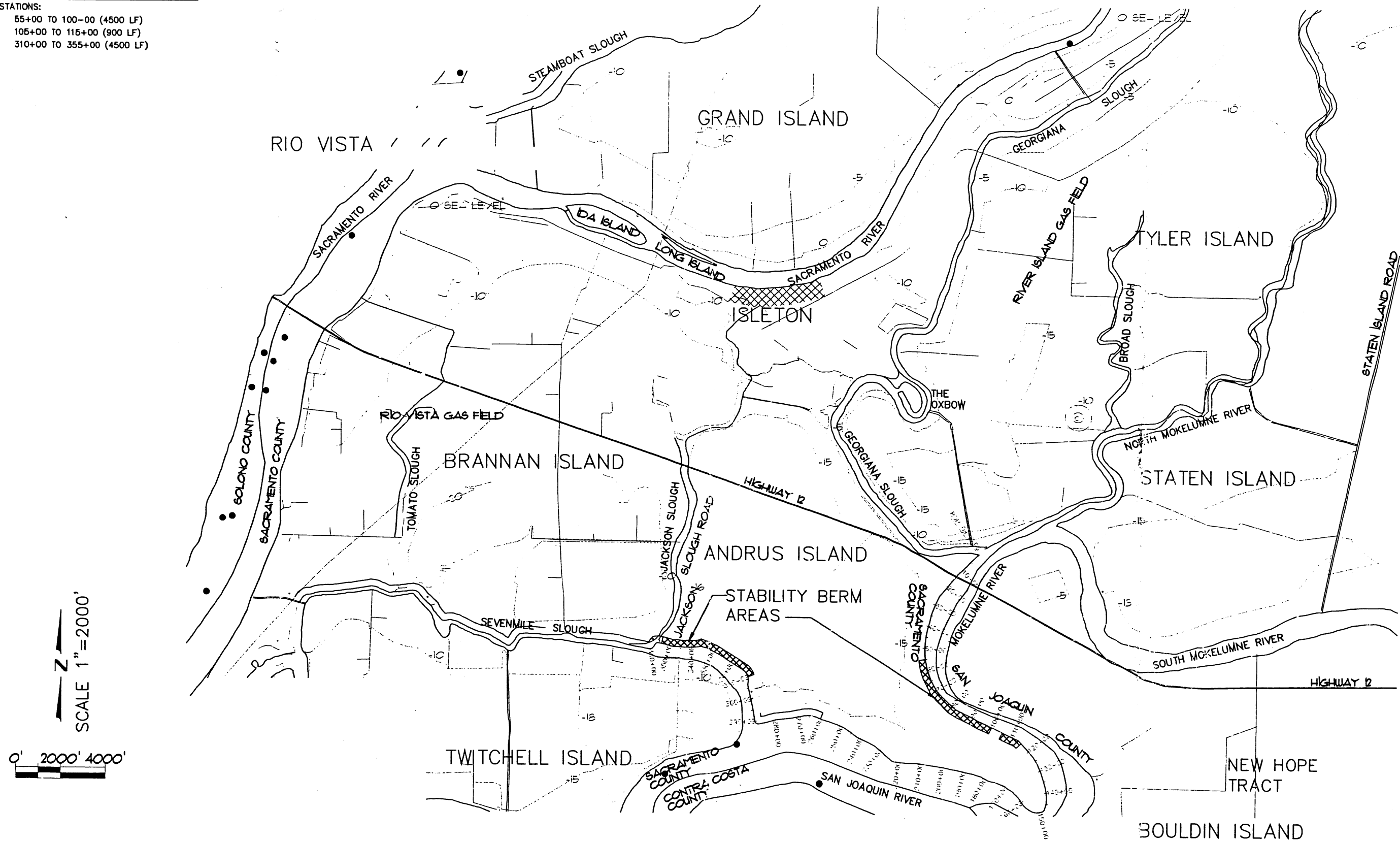
#### **SCOPING AND SCREENING INFORMATION :**


- **Urgency** - The project involves a historically unstable area that is part of a levee section that failed in the summer of 1972 while a repair and rehabilitation effort was being undertaken by the Levee District.
- **Flood flow impacts** - The project would not effect flood flows in other areas of the levee system.
- **Project results** - Reduce the potential for flooding of crucial infrastructure with regional and statewide importance. Reduce the risk for significant property damage and economic loss. Reduce the threat to an existing, historic community and major recreational resource. Reduce the threat to water quality and water transport reliability that a levee failure would pose.
- **Alternatives** - There are no non-structural alternatives to this proposal.
- **Who Benefits** - Long term beneficiaries include the State, water contractors, local residents, business and recreational interests.
- **Federal, State and local Support** - The District has been a consistent participant in the Levee Subventions Program and a recipient of State support.
- **Obstacles** - None are known.
- **Cost Sharing** - The local Levee District has indicated its willingness to cost share.

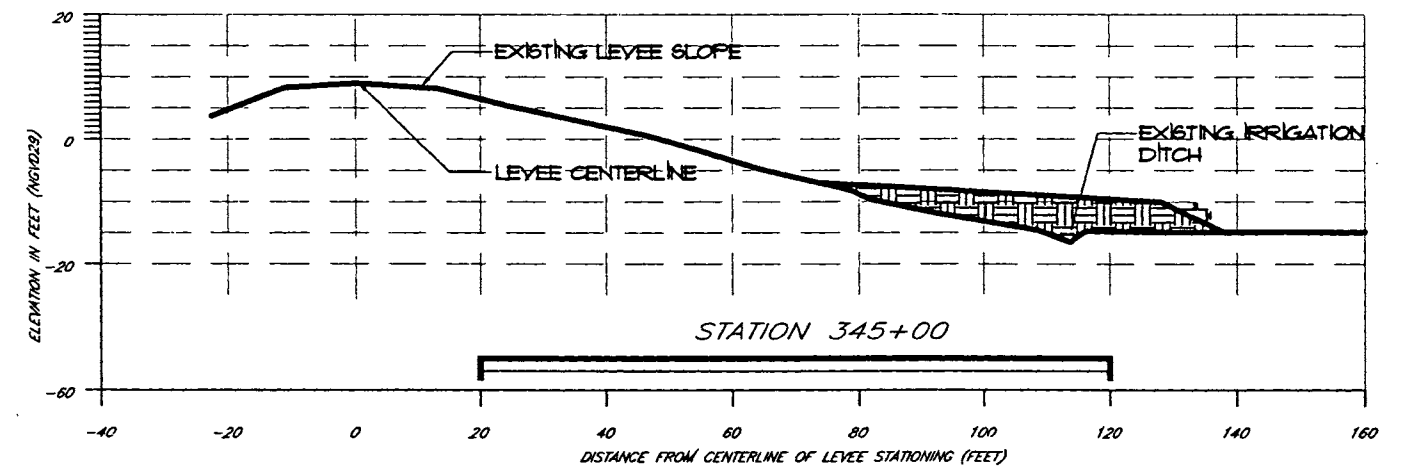
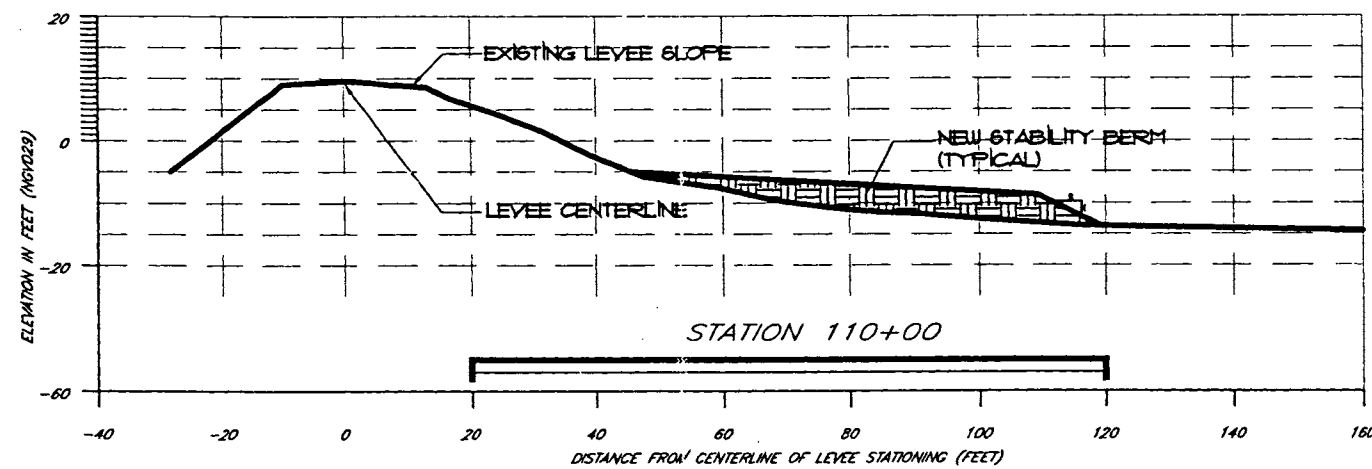
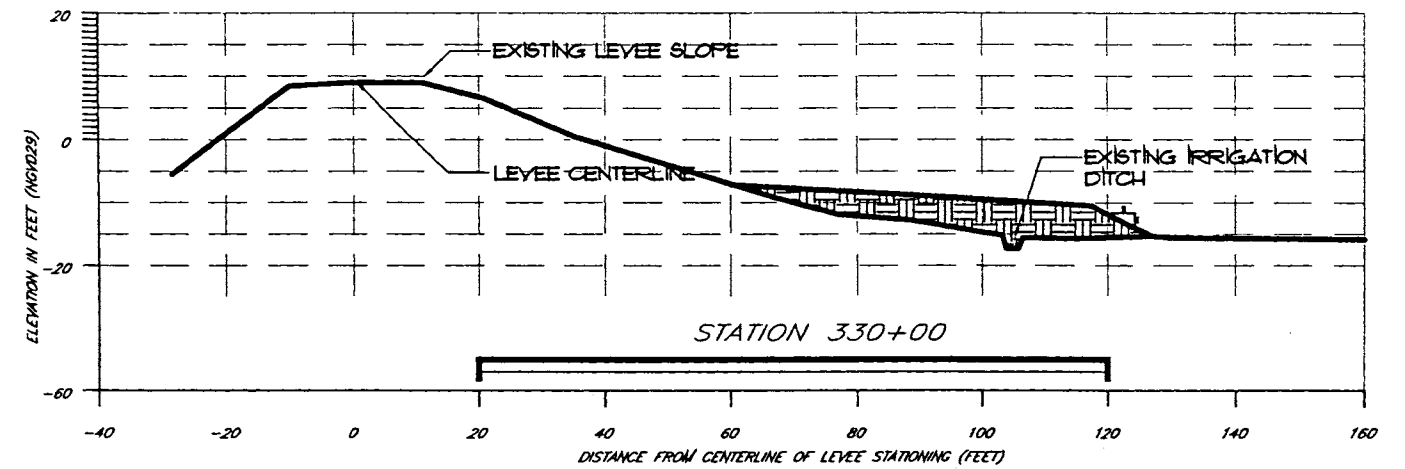
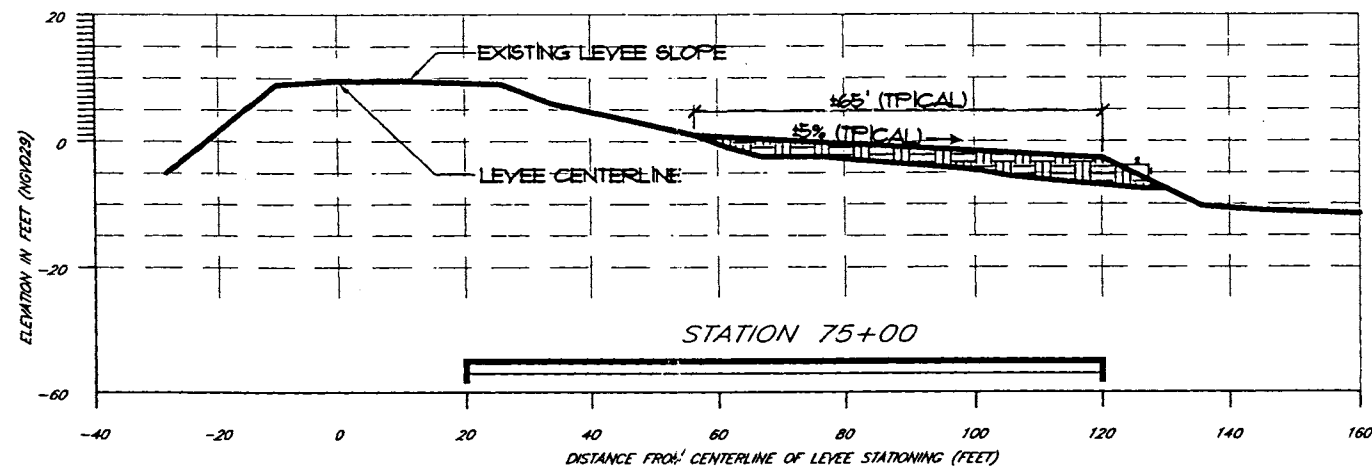
# STABILITY BERM AREAS

## STATIONS:

55+00 TO 100+00 (4500 LF)  
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REV.	DATE	BY	DESCRIPTION	APPROVED	DATE	DATE	DESIGNED BY: GILBERT LABRIE DRAWN BY: YA HER REVIEWED BY: GILBERT LABRIE SUBMITTED BY: PROJECT MANAGER	 <b>DCC</b> ENGINEERING CO., INC. Tel (916) 778-8777 Fax (916) 778-8888 P.O. BOX 289, WALNUT GROVE, CA 95690	APPROVED BY:  REG. NO.:  EXP. DATE:  DATE:	Architecture Civil Engineering Land Use Planning Feasibility Studies Environmental Permitting Program/Construction Management	BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT 2006 STABILITY BERM PROJECT	SITE PLAN	7002.00 SHEET 1 OF 2
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REV.	DATE	BY	DESCRIPTION	APPROVED	DATE	DESIGNED BY: GILBERT LABRUE DRAWN BY: YIA HER REVIEWED BY: GILBERT LABRUE SUBMITTED BY: PROJECT MANAGER: DATE: 1-31-06	 <b>DCC</b> <b>ENGINEERING</b> <b>CO., INC.</b> Tel (916) 778-8777 Fax (916) 778-8888 P.O. BOX 989, WALNUT GROVE, CA 95690	APPROVED BY: REG. NO.: EXP. DATE: DATE:	BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT 2006 STABILITY BERM PROJECT	REPRESENTATIVE CROSS SECTIONS	7002.00 SHEET <b>2</b> OF 2
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